

BOOK REVIEW

*Proceedings of a Symposium on the Recovery and Future of the Northeastern Forest, Connecticut College, April 12, 1997* edited by Robert A. Askins and Glenn D. Dryer. 1998. Published in the journal *Northeastern Naturalist*, Volume 5, Number 2, pp. 95–172. ISSN 1092-6194 \$10.00 (paperback). Published by collaborative effort based at the Humboldt Field Research Institute, Steuben, ME (available from <http://maine.maine.edu/~eaghill>; mention this review and receive a 20% discount).

On April 12, 1997, the Center for Conservation Biology and Environmental Studies at Connecticut College, New London, sponsored a symposium for land managers, conservationists, and educators in environmental science, designed to assist in the determination of whether biological diversity and ecological functioning is restorable and sustainable. The seven presenters, a commendable ensemble of some of the more notable ecologists in the field today, have produced a symposium of papers which is both thoughtful and informative. The overall viewpoint is one of integrative ecology (the belief that complex systems such as ecosystems must be looked at as a whole, over long periods, to be understood), however the reductionist perspective is also represented, as well as suggestions from environmental economists.

The take-home message of this symposium is clearly that northeastern forests need to be evaluated and a balance struck between their ecological and subjective social value, and then proactively managed to foster and protect such states. The point that nature is dynamic and therefore there is no historical state which should serve as our restorative target, is often repeated. Lesser themes of the conference include the need for long-term research, the effects of air pollution on forest ecosystems, and the need to improve the processes by which ecological research is disseminated to managers and policy-makers. The conference admirably wrestles with the coexisting evidence of forests in metabolic decline, systemically speaking, while many forest species are on the increase.

William A. Niering provides a good start with his overview of the natural and anthropogenic agents affecting regional forests in his paper "Forces that shaped the forests of the northeastern Unit-

ed States." The impacts of human settlement, by far the predominant influence, is recounted from the Indian to the post-colonial period, and current threats such as pollution, introduction of exotic species, and fragmentation of forests are cited.

David R. Foster and Glenn Motzkin follow by asserting the importance of a historical perspective in the interpretation of forest landscapes for ecological conservation, management, and development in "Ecology and conservation in the cultural landscape of New England: Lessons from nature's history." The authors claim that while climate and elevation were the primary forces shaping regional forests in precolonial days, past land-use and edaphic factors exert the reigning influences on vegetative composition and structure today. They introduce the point that nature has no static ideal; vegetative communities have no record of long-term consistency, nor have regional floras shown any tendency to revert to floras of the past. Mankind thus has strongly influenced both past and future forest states.

Gene E. Likens and Kathleen F. Lambert discuss the critical need for sustained research in their paper "The importance of long-term data in addressing regional environmental issues." They strongly present the danger of using short-term data to evaluate long-term patterns, the need for safeguarding long-term data and research sites in perpetuity, and recommendations that experimental designs be adaptable to future concerns and not "question-driven." Also advocated is the use of long-term watershed ecosystem research to guide sustainable forestry policy.

John M. Skelly takes the road less traveled with his clearly reductionist perspective in "A brief assessment of forest health in northeastern United States and southeastern Canada." He argues that while air pollution may be a forest stressor, there has been no hard evidence that regional forests are in decline. In support of this view are cited two short-term and one ten-year forest agencies study, which found no clear cause-effect relationship between the tree mortality and pollution deposition.

In "The epidemiology of forest decline in eastern deciduous forests," Orié L. Loucks elegantly and effectively refutes the reductionist viewpoint. What begins as a discussion of the appropriate research framework for the study of complex systems ends in a well-presented scientific argument concluding that air pollution has indeed been the cause of large-scale tree mortality in the region. Along the way, the integrative versus reductionist ap-

proaches are discussed, and the systematic symptoms of "forest decline" are defined.

Dina Franceschi and James R. Kahn present the economist's perspective in "The potential contribution of economics to the recovery of northeastern forests." Their point is that the social benefits of healthy forests need to be determined, and then policies providing economic incentives to landowners and managers need to reflect these goals. As long as private benefits exceed the public good, forests will continue to be developed, fragmented, and polluted.

Lastly, John Kricher delivers a summary of sorts with "Nothing endures but change: Ecology's newly emerging paradigm," in which he states that human stewardship of natural systems is essential. The concept of "nature's balance" is a western philosophical construct which must be dismissed so that proactive goals for ecosystem management can be determined and achieved. Clearly, the northeastern forests of tomorrow are being shaped by the perspectives of land managers, conservationists, and educators of today. This symposium does a commendable job of representing these evolving perspectives.

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